

**Amendments to Claims:**

The listing of Claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1- 8 (cancelled)

9. (New): An analysis system for an analytical investigation of a sample, in particular of a body fluid, the system comprising:

a test element for performing analysis of the sample when brought into contact with the sample, such that after contact with the sample a measurable change occurs in a measuring zone of the test element, wherein the measurable change is characteristic for the analysis;

an evaluation apparatus having a test element support for supporting the test element and an electronic device for measuring the measurable change;

wherein the electronic device comprises a temperature correction unit having an ambient temperature sensor, for determining the ambient temperature prevailing in the measurement zone at the time of measuring the measurable change, wherein the temperature sensor is connected to the electronic device to correct measurement errors caused by temperature variations, wherein the temperature sensor is located remote from the measurement zone;

wherein the temperature correction unit further comprises a temperature history imaging device for currentless tracing a temperature history of the test element before the time of measuring the measurable change in the measuring zone, such that such tracing is conducted without use of electricity; and

wherein the temperature history imaging device includes a thermal mass that is suspended in the evaluation apparatus and thermally insulated from the evaluation apparatus, and a plurality of temperature sensors located at different positions relative to the thermal mass.

10. (New): The system of Claim 9, wherein one of the temperature sensors of the temperature history imaging device is located in the interior of the thermal mass.

11. (New): The system of Claim 10, wherein the temperature sensor located in the interior of the thermal mass is located in the center of the thermal mass.

12. (New): The system of Claim 9, wherein output of at least two of the a plurality of temperature sensors of the temperature history imaging device are compared for tracing the temperature history before the time of measurement of the measurable change in the measuring zone.

13. (New): The system of Claim 9, wherein a second temperature sensor of the temperature history imaging device is located such that it does not contact the thermal mass.

14. (New): The system of Claim 13, wherein the second temperature sensor also operates as the ambient temperature sensor.

15. (New): The system of Claim 9, wherein the thermal conductivity of the thermal mass is such that changes in ambient temperature lead to measurable temperature gradient in the thermal mass, wherein the gradient form an image of the ambient temperature history before the time of measurement of the measurable change in the measuring zone..

16. (New): The system of Claim 15, wherein at least two temperature sensors from the plurality of temperature sensors of the temperature history imaging device are located in contact with the thermal mass.

17. (New): The system of Claim 16, wherein one the at least two temperature sensors is located on a surface of the thermal mass.

18. (New): The system of Claim 9, wherein the thermal mass is spherical, such that the surface of the thermal mass is not insulated from ambient air.

19. (New): The system of Claim 9, wherein the thermal mass is disk shaped, such that flat sides of the disk are thermally insulated from the ambient air.